DOCUMENT RESUME

ED 192 391 CS 503 025

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TITLE How to Sell Nothing and Get Rich--or--Wealth Creation in an Information Society.
PUB DATE Sep 80
NOTE 9p.; Paper presented at the Annual Meeting of the International Institute of Communications (Ottawa, Canada, September 7-11, 1980).

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Consumer Economics; *Economics; *Information Needs; *Information Systems; Information Utilization; Marketing; *User Satisfaction (Information)

ABSTRACT

Unlike other economic goods whose worth can be determined through market research, the market place for information denies the creator of that information the preferences of consumers. Copyright may be considered partial compensation. Copyright, however, is not an aspect of information per se, but rather a result of the way the information is packaged and distributed. In an information market, if the buyer has perfect information, the market is destroyed, not perfected. The consumer also faces a problem, as the consumer is reliant on peers for help in both evaluating and pricing information. The evaluation and pricing strategies require detailed usage data from the information system that supports the content, data that can be captured only by systems capable of supporting content behaving as a private economic good. A network's ability to process data about how content is used and to convert that into useful information to aid in the evaluation and pricing of content could be our most important resource as we enter the information age. (HOD)

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"HOW TO SELL NOTHING AND GET RICH"

- or -

"WEALTH CREATION IN AN INFORMATION SOCIETY"

Prepared for the 1980 Annual Conference of the

International Institute of Communications

Ottawa, Canada.

September 10, 1980

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For a society to be properly called an information society, it must have a significant portion of its economic surplus generated by the exchange of ethereal goods. To seek the justification of a lot of sophisticated communications hardware on any lesser grounds is to miss the long term significance of the "information revolution".

The true significance of the railroads was not in the quantity of jobs involved in their construction and operation. It was the flow of goods carried by the trains that was important. The economics of the content provided the "raison d'etre" for the railroad. As we embrace the new and exciting hardware, that seems to offer so much potential, we must be sure there is an adequate economic "raison d'etre" in the content exchanges to justify the hardware.

Our past economic experience has done little to prepare us for the task of identifying exactly how a society can generate real wealth by simply shuffling information around. Information is a recalcitrant economic good. Information is usually easy to copy and steal, and without the owner ever knowing of the theft. It is not unusual for information to improve with use, while hard goods don't behave this way. Because we have had to imprint our information on physical carriers, like the paper in a book, or the vinyl in a phonograph record, we have avoided the most difficult aspects

of forcing information to act as a conventional economic good. We sold books and records, not information. The Canadian copyright law illustrates this point quite well, for the composer's royalty of two cents per record side was not changed when the technology changed from the 78 rpm, one selection per side, to the many selections per side of the LP record. Is music like beef: sold by the "side"?

The mass communications media, like radio and TV, treated their content like a public economic good, and are probably the best example of such a process. Here, once the good has been produced, even illegitimate consumption does not reduce the availability of the material to potential consumers. Given enough money, one could significantly reduce the availability of Lincoln Continentals by merely buying the available supply. There is no way the tuning millions of TV sets to a particular channel can reduce the availability of that channel. When a good that behaves in this public fashion is forced into marketplace conditions, choice becomes limited, and externalities like copyright are required to assure a degree of fairness.

As the most efficient marginal price for information behaving as a public economic good is zero, there is no use-proportional reward available to the creator. Hence, the important marketplace messages that convey the individual

preferences of consumers to the producers are denied. The creation and development of content is left to "experts", guided at best by blunt statistical instruments. The essential stimulating economic messages are just not present. The content stagnates, and is underproduced and of low quality.

To compensate the creator for his effort, payments are made by those who benefit from the use of content, in proportion to their use and their benefit, to those who create the material. This is the performing rights part of copyright. It is an externality made necessary because a good that behaves in a public fashion is forced into a market situation. Were the good to behave as a proper private good, such externalities could be avoided.

A proper Videotex system can support its content behaving as a private economic good, for the system is quite capable of keeping detailed records of all useages, and can prepare not only individual bills for the users, but also detailed revenue reports for the creators of the content. No broadcast Teletext system can do this. The content of a Teletext system is constrained to behaving as a public economic good. Two systems, one a Videotex and the other a Teletext, could offer precisely the same content. One could offer its content as a private economic good, while the other could only offer its

content as a public economic good. Hence, it is the vehicle and not the content that determines the economic behaviour of the content. Copyright is then not an aspect of information per se, but rather results from the way we package and distribute it.

If someone should offer to sell me a joke for two dollars, I'd want to know all about the joke before agreeing to purchase it. Once I knew all this, my desire would probably evaporate. Economists tell us that if a market is to work really well, then buyers must have perfect information. In an information market, if the buyer has perfect information, the market is destroyed, not perfected. Clearly, information is a strange economic good.

Most people, when buying a car, will discuss the matter with their friends, seeking their advice. In a sense, each purchase is the result of a small scale social process in which the various possibilities are been evaluated, a process in which more than just the purchaser is involved. When a teenager buys a popular record, a rather complex social process is involved. The value of that record is largely the result of a social process of evaluation.

Following the automobile analogy somewhat further, the car manufacturer knows very well what his costs are, and how much he must get for the selling price to make a profit. The

composer of a song faces a much more ambiguous situation. In one sense, anything he can get is gravy. How can the creator set a price for an ethereal product where the cost of duplication and distribution is negligible? The author must receive help with this pricing problem from the system that does the distribution.

The consumer also faces a problem, and he relies on his peers for help in both evaluating and pricing information. A communication service that tells how one's peers have reacted to the content being considered could overcome much of the evaluation problem. In addition, the system could act as the author's surrogate in the task of bargaining with potential users, and so ease the pricing problem. Starting with the author's suggested per-use price, the system could adjust that price in such a way as to maximize the return to the author while capturing some arbitrary percentage of the offered demand. Both these strategies, the evaluation and pricing ones, require detailed useage data from the information system that supports the content, data that can only be captured by systems capable of supporting content behaving as a private economic good.

Wealth, in such an information marketplace, would be created by the social process of content evaluation. The content, when first placed there, was worth only the author's

time spent in creating it. After a period of use, that content would have a value that had been determined by actual user behaviour.

Even though the new technology is becoming very inexpensive, it is never going to be cheap enough to eliminate the need for handling a lot of content as a public economic good. Just as in any inventory situation, the bulk of the transactions involve a small portion of the total items. However, it is necessary to carry the infrequently used items in order to satisfy the range of demand and to provide a mechanism for the development and selection of the new material. Hence, a proper information marketplace would likely support content behaving as both private and public economic goods, each being used for its special characteristics.

No efficient single network configuration now exists that can efficiently handle both these situations simultaneously. However, before the network architecture problem is addressed, much must be learned about the content, and its economic justification and the requisite infrastructure. Perhaps information economics is to conventional economics as Einstein's Theory of Relativity is to Newton's Theory of Gravitation. In each case, the earlier theory is a special case of the later one. However, much research and learning

must be done before such an economic theory can be used as the basis for system design. However, to design an information system for public use without such a theoretical basis is like attempting modern physics without Einstein's contribution. A clear understanding of how wealth is created in an information society is clearly essential, and if, as it is my belief, it is found to be through the social process of information evaluation, then our perception of the role of network must be very much enlarged, for now it becomes the mainstay of tomorrow's economic engine. Network's ability to process data about how content is used, and to convert that into useful information to aid in the evaluation and pricing of content could be our most important resource as we enter the information age.